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10/599,470	11/17/2008	Hagen Klauk	I433.251.101/14187	9475
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)			
	10/599,470	KLAUK ET AL.			
Office Action Summary	Examiner	Art Unit			
	MARK A. LAURENZI III	2894			
The MAILING DATE of this communication ap Period for Reply	pears on the cover sheet with the c	orrespondence address			
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D. - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period. - Failure to reply within the set or extended period for reply will, by statut Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNICATION 136(a). In no event, however, may a reply be time will apply and will expire SIX (6) MONTHS from e, cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).			
Status					
Responsive to communication(s) filed on Aplic This action is FINAL . 2b) ☑ This Since this application is in condition for allowed closed in accordance with the practice under	s action is non-final. ance except for formal matters, pro				
Disposition of Claims					
4) ☐ Claim(s) 17-18 and 20-38 is/are pending in the 4a) Of the above claim(s) is/are withdrases 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 17,18 and 20-38 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or the striction and/or	awn from consideration.				
Application Papers					
9)☑ The specification is objected to by the Examination 10)☐ The drawing(s) filed on is/are: a)☐ accomplicated may not request that any objection to the Replacement drawing sheet(s) including the correct to by the E	cepted or b) objected to by the E drawing(s) be held in abeyance. See ction is required if the drawing(s) is obj	e 37 CFR 1.85(a). lected to. See 37 CFR 1.121(d).			
Priority under 35 U.S.C. § 119					
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 					
Attachment(s) 1) Notice of References Cited (PTO-892)	4) Interview Summary				
Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:				

DETAILED ACTION

This Non-Final office action is in response to the remarks filed by Applicant on 03-16-2010.

Remarks

Applicant's arguments have been fully considered and are persuasive.

Therefore, the non-final rejection as set forth in an Office Action mailed 12-16-2009 has been withdrawn.

However, upon further consideration, a new ground of rejection is made in view of newly discovered references as cited below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 recites the following limitations:

Re claim 34, a force sensor comprising: a substrate; and <u>means for</u> providing an organic field effect transistor applied on the substrate, in which a mechanical force acting On the transistor <u>means</u> causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force.

It is unclear if the second iteration of the term "means" refers to the first iteration "means for" as shown in bold above or to other limitations not present within claim 34.

For examining purposes the second iteration of "means" will be interpreted to refer to the first iteration of "means for".

Furthermore, the claim element "means for" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph.

However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

In the instant case, the specification appears to not describe or give an example of that which the element "means for" in claim 34 refers as required by U.S.C. 112, sixth paragraph.

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35) U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or

associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17-18, 20-22 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman 2002/0105080 A1, and further in view of Chou et al. 2003/0218194 A1.

Re claims 17-18 and 21-22, Speakman (i.e. all relevant Figs. and related text) teaches: a force sensor comprising: a substrate made of a material from a group consisting of glass, ceramic, plastic, a polymer film metal film and paper (polymeric transistor may be deposited on a substrate... paper, [0038]); and an organic field effect transistor applied on the substrate and a mechanical force acting on the transistor (sensor 650 operates by touch (side note: touch is a form of external mechanical force), [0463]), the organic field effect transistor comprising an active layer (p-fet, [0467]) provided between a gate dielectric 660 and a passivation layer (unlabeled layer directly above 662, Fig. 9(b)) and between a source electrode and a drain electrode (662 and 664), wherein the active layer (region between source and drain) is made of a material selected from the group consisting of pentacene (key semiconductor materials includes

pentacene, [0032]), thiophene, oligothiophene, polythiophene, and fluorine yet, appears to be explicitly silent with respect to disclosing: where a mechanical force acting on the transistor causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force and a passivation layer.

However, Chou (i.e. all relevant Figs. and related text) teaches: <u>a constant</u>

voltage/current circuit that is connected to a current/voltage measuring device that detects

a source-drain current [0020].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the semiconductor device including a source drain system as taught by Speakman with the functional measurement system as taught by Chou for the benefit of detecting if the current/voltage is moving towards stability (Chou, [0059]).

Yet, Speakman in view of Chou appears to remain explicitly silent with respect to disclosing: a (not un-labeled) passivation layer.

However, in a different embodiment a passivation layer 616 is formed over a transistor in Fig. 8(a).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the embodiments as taught by Speakman in view of Chou so as to provide a means for protecting the device (protective layer, [0460]).

Re claim 20, Speakman in view of Cho teaches in an embodiment: the force sensor according to Claim 19claim 17, comprising wherein the substrate comprises a polymer film having a material from a group consisting of polyethylene napthalate, polyethylene terephthalate,

polyimide, polycarbonate (Speakman, substrate.... Polycarbonate, [0511]) and/or polyethene ether ketones.

Furthermore, Speakman teaches that polycarbonate material is an alternative substrate material [0511].

Therefore, as reasoned from well established legal precedent, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the polycarbnonate [0511] substrate material as disclosed by Speakman for the substrate material (658, Fig. 9(b)) also taught by Speakman because the substitution of one known alternative element for another known alternative element would have yielded predictable results to one of ordinary skill in the art at the time the claimed invention was made; and, "a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product is (obvious) not of innovation but of ordinary skill in the art and common sense." KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007).

Re claims 34(as understood) and <u>36</u>, Speakman (i.e. all relevant Figs. and related text) teaches: a force sensor comprising: a substrate (polymeric transistor may be deposited on a substrate... <u>paper</u>, [0038]); and means for providing an organic field effect transistor (p-fet, [0467] and [0032]) applied on the substrate and a mechanical force (sensor 650 operates by touch (side note: touch is a form of external mechanical force), [0463]) yet, appears to be explicitly silent with respect to disclosing: in which a mechanical force acting on the transistor means causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force.

However, Chou (i.e. all relevant Figs. and related text) teaches: a constant voltage/current circuit that is connected to a current/voltage measuring device that detects a source-drain current [0020].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the semiconductor device including a source drain system as taught by Speakman with the functional measurement system as taught by Chou for the benefit of detecting if the current/voltage is moving towards stability (Chou, [0059]).

Re claim 35, Speakman in view of Chou teaches: the force sensor according to claim 34, wherein the organic field effect transistor means is a pentacene transistor having an active layer made of pentacene (Speakman, key semiconductor materials includes **pentacene**, [0032]) between its source electrode and its drain electrode (Fig. 9(b)).

Re claim 37, Speakman in view of Chou teaches: the force sensor according to claim 34, wherein the substrate comprises a polymer film having a material from a group consisting of polyethylene napthalate, polyethylene terephthalate, polyimide, polycarbonate (Speakman, substrate.... Polycarbonate, [0511]) and/or polyethene ether ketones.

Furthermore, Speakman teaches that polycarbonate material is an alternative substrate material [0511].

Therefore, as reasoned from well established legal precedent, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the polycarbnonate [0511] substrate material as disclosed by Speakman for the substrate material (658, Fig. 9(b)) also taught by Speakman because the substitution of one known alternative element for another known alternative element would have yielded predictable results to one of

ordinary skill in the art at the time the claimed invention was made; and, "a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product is (obvious) not of innovation but of ordinary skill in the art and common sense." KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman 2002/0105080 A1, and further in view of Chou et al. 2003/0218194 A1 and Sakai et al. 64-5075.

Re claim 23, Speakman (i.e. all relevant Figs. and related text) teaches: a pressure sensor comprising: at least one force sensor comprising a substrate (polymeric transistor may be deposited on a substrate... paper, [0038]), and an organic field effect transistor applied on the substrate (Fig. 9(b), and key semiconductor materials...pentacene, [0032]), a mechanical force acting on the transistor (sensor 650 operates by touch (side note: touch is a form of external mechanical force), [0463]) yet appears to be explicitly silent with respect to disclosing: in which a mechanical force acting on the transistor causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force; and where the substrate is configured as a deformable diaphragm and the measurement quantity corresponding to the bending state of the diaphragm.

However, Chou (i.e. all relevant Figs. and related text) teaches: a constant voltage/current circuit that is connected to a current/voltage measuring device that detects a source-drain current [0020].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the semiconductor device including a source drain system as taught by Speakman with the functional measurement system as taught by Chou for the benefit of detecting if the current/voltage is moving towards stability (Chou, [0059]).

Yet, Speakman in view of Chou appear to be explicitly silent with respect to disclosing: and where the substrate is configured as a deformable diaphragm and the measurement quantity corresponding to the bending state of the diaphragm.

However, Sakai (i.e. all relevant Figs. and related text) teaches: that a diaphragm can function such that a diaphragm is provided and the change of a current induced by the change of the diaphragm caused by an applied pressure is detected (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the touch (force) sensor including a substrate as taught by Speakman with the diaphragm as taught by Sakai for the benefit of providing a medium such as a diaphragm that provides enhanced sensitivity so as to be able to detect sound waves.

Claims 24-25 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman U.S. 2002/0105080 A1, and further in view of Chou et al. 2003/0218194 A1 and Yaniv et al. 4,827,085.

Re claims 24-25, Speakman (i.e. all relevant Figs. and related text) teaches: a one-or two-dimensional position sensor for measuring the position of a mechanical force action along a line or within an area using a multiplicity of force sensors comprising: one or more force sensors comprising a substrate (polymeric transistor may be deposited on a substrate... paper, [0038]), and an organic field effect transistor applied on the substrate, a mechanical force acting on the

transistor (sensor 650 operates by touch (side note: touch is a form of external mechanical force), [0463]) yet appears to be explicitly silent with respect to disclosing: in which a mechanical force acting on the transistor causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force and where the force sensors are arranged at regular distances from one another in a form of a one- or two-dimensional matrix on a common substrate.

However, Chou (i.e. all relevant Figs. and related text) teaches: <u>a constant</u>

voltage/current circuit that is connected to a current/voltage measuring device that detects

a source-drain current [0020].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the semiconductor device including a source drain system as taught by Speakman with the functional measurement system as taught by Chou for the benefit of detecting if the current/voltage is moving towards stability (Chou, [0059]).

Yet, Speakman in view of Chou appears to be explicitly silent with respect to disclosing: where the force sensors are arranged at regular distances from one another in a form of a one- or two-dimensional matrix on a common substrate.

However, Yaniv (e.g. all relevant Figs. and related text) teaches a position sensor (sensitive position sensor, col. 2/lls. 19-21) device including an array (col. 15/lls. 60-68) devices and where the force sensors are arranged at regular distances from one another in a form of a one- or two-dimensional matrix on a common substrate (Shown in Fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device including a force sensing device by Speakman in

view of Chou with the position sensor device in array configuration as taught by Yaniv for the benefit of forming an organic field effect device that can be used to detect and determine the precise location of a force (col. 11/lls 65-68 and col. 12/lls. 1-2) e.g. a finger touch.

Re claim 38, Speakman in view of Chou and Yaniv teaches: the sensor according to claim 24, wherein the organic field effect transistor comprises an active layer provided between a gate dielectric and a passivation layer and between a source electrode and a drain electrode (Speakman, Fig. 9(b)), wherein the active layer is made of a material selected from the group consisting of pentacene (Speakman, key semiconductor materials includes **pentacene**, [0032]), thiophene, oligothiophene, polythiophene, and fluorene.

Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman in view of Chou et al. and Yaniv et al. as applied to claim 25 above, and further in view of Mehta et al. U.S. 3,795,898.

Re claim 26, Speakman in view of Chou and Yaniv teach all of the limitations of claim 26 including: the sensor according to claim 25, comprising: where the organic field effect transistors are arranged in rows and columns (Yaniv, Fig. 4); yet appear to be explicitly silent with respect to disclosing: a row decoder is connected or can be connected to the gate terminals for row-by-row selection and driving.

However, Mehta teaches: terminals connected to the gates of device Q40 in the row address decoders (col. 9/lls. 36-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the organic field effect transistor including an array of devices as taught by Speakman in view of Chou and Yaniv with the device as taught by Mehta that includes

connected gate terminals in the row address decoders for the benefit of forming an organic field effect device that can be used to detect and determine the precise location of a force (col. 11/lls 65-68 and col. 12/lls. 1-2) e.g. a finger touch.

Re claim 27, Speakman in view of Chou teaches: a driving and measuring unit connected to the drain or source terminals of the organic field effect transistors in all columns for the purpose of driving and detecting the column position of the force action (Chou, [0020]); yet, appear to be explicitly silent with respect to disclosing a multiplicity of force sensors according to claim 17 that are arranged on a common substrate at regular distances in the form of a two-dimensional matrix subdivided into rows and columns; and a row decoder connected to tile gate terminals of the organic field effect transistors of all the rows for row-by-row selection and detection of the position of the force action in tile row direction.

However, Yaniv (e.g. all relevant Figs. and related text) teaches a position sensor (sensitive position sensor, col. 2/lls. 19-21) device including an array (col. 15/lls. 60-68) devices and where the force sensors are arranged at regular distances from one another in a form of a one- or two-dimensional matrix on a common substrate (Shown in Fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device including a force sensing device by Vildomerson with the position sensor device in array configuration as taught by Yaniv for the benefit of forming an organic field effect device that can be used to detect and determine the precise location of a force (col. 11/lls 65-68 and col. 12/lls. 1-2) e.g. a finger touch.

Yet, Speakman in view of Chou and Yaniv appear to remain explicitly silent with respect to disclosing: and a row decoder connected to tile gate terminals of the organic field effect

transistors of all the rows for row-by-row selection and detection of the position of the force action in tile row direction.

However, Mehta teaches: terminals connected to the gates of device Q40 in the row address decoders (col. 9/lls. 36-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the organic field effect transistor including an array of devices as taught by Speakman in view of Chou and Yaniv with the device as taught by Mehta that includes connected gate terminals in the row address decoders for the benefit of forming an organic field effect device that can be used to detect and determine the precise location of a force (col. 11/lls 65-68 and col. 12/lls. 1-2) e.g. a finger touch.

Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman in view of Chou et al., Yaniv et al. and Mehta et al. as applied to claim 27 above, and further in view of Blanchet-Fincher 2002/0149315 A1.

Re claims 28-29, Speakman in view of Chou, Yaniv and Mehta appears to be explicitly silent with respect to disclosing: the fingerprint sensor according to Claim 27, comprising: at least one perspiration-resistant protective layer provided as protection against the ingress of water and organic contaminations above the active layer of the organic field effect transistors.

However, Blanchet-Fincher (i.e. all relevant Figs. and related text) teaches: that a **perfluorinated** material may be used as a protective layer for an organic electronic device [0083-0084].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the protective layer as taught by Blanhet-Fincher for the

protective layer as taught by Speakman in view of Chou, Yaniv and Mehta for the benefit of protecting the device.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman in view of Chou et al., Yaniv et al. and Mehta et al., Blanchet-Fincher as applied to claim 29 above and further in view of S.T. Cui. "Intermolecular potentials and vapor-liquid phase equilibria of perfluorinated alkanes."

Re claim 30, Speakman in view of Chou, Yaniv, Mehta and Blanchet-Fincher appears to be explicitly silent with respect to disclosing: where the perfluorinated material is perfluorohexadecane.

However, S.T. Cui (i.e. all relevant Figs. and related text) teaches that perfluorohexadecane is a perfluorinated material (title and 2. "Models and simulation details").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device including a perfluorinated material as taught by Speakman in view of Chou, Yaniv, Mehta and Blanchet-Fincher with a perfluorinated material such as perfluorohexadecane as taught by Cui for the benefit of incorporating a material that can suppress the rate of particle exchange because said material has a low particle interchange rate (section 2, pgs. {last sentence} 55 - 56).

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman in view of Chou et al., Yaniv et al., Mehta et al. and Blanchet-Fincher as applied to claim 28 above, and further in view of Reamey et al. U.S. 5,543,944.

Re claim 31, Speakman in view of Chou, Yaniv, Mehta and Blanchet-Fincher appear to be explicitly silent with respect to disclosing: wherein a first protective layer includes a

hydrophobic material and a second protective layer includes a hydropkilic polymer which acts as a diffusion barrier against lipophilic contaminants.

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However, Reamey teaches the use of hydrophilic and lipothilic materials as an encapsulating material (col. 7/lls. 38-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device including a passivation layer as taught by Speakman in view of Chou, Yaniv, Mehta and Blanchet-Fincher with the hydrophilic/lipothilic materials as taught by Reamey for the benefit of forming an encapsulated device which is resistant to contamination, e.g. water.

Claim 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speakman in view of Chou et al., Yaniv et al., Mehta et al., Blanchet-Fincher and Reamey as applied to claim 31 above, and further in view of Ivanov et al. 2004/0253375 A1.

Re claims 32-33, Speakman in view of Chou, Yaniv, Mehta and Blanchet-Fincher appear to be explicitly silent with respect to disclosing: wherein a first protective layer includes a hydrophobic material and a second protective layer includes a hydrophilic polymer which acts as a diffusion barrier against lipophilic contaminants and the fingerprint sensor according to claim 31, wherein the first protective layer covers the second protective layer.

However, Ivanov (i.e. all relevant Figs. and related text) teaches: the formation of a dielectric layer to protect a semiconductor substrate [0150] comprising a lower hydrophilic material (144, [0174)] and an upper hydrophobic material (156, [0173]).

It would have bee obvious to one of ordinary skill in the art at the time invention was made to position a hydrophobic layer on a hydrophilic layer since one of the two possible arrangements is taught by Ivanov.

Therefore, it would have been obvious to one or ordinary skill in the art at the time the invention was made to rearrange the hydrophobic and hydrophilic layers, since part relocation of a device where said relocation would not modify the operation of the device involves only routine skill in the art and is unpatentable. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) and In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

Furthermore, said one of ordinary skill in the art would have recognized that the cited references are in the same field of endeavor. Each individual reference of the group of the cited references would have recognized the other references within the group of cited references to be pertinent art in the same field of endeavor.

All of the limitations as claimed by Applicant have been treated on the merits and properly rejected.

Response to Arguments

Applicant's remarks filed 03-16-2010 have been fully considered but are moot in view of the present ground(s) of rejection.

Furthermore, the entirety of Applicant's arguments is addressed by rejection supra.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK A. LAURENZI III whose telephone number is (571)270-7878. The examiner can normally be reached on Monday through Friday 8am to 5pm EST.

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Art Unit: 2894

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Nguyen can be reached on 571-272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARK A. LAURENZI III/ Examiner, Art Unit 2894 /Kimberly D Nguyen/ Supervisory Patent Examiner, Art Unit 2894

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